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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,626	08/29/2003	Arnab Das	TI-21550.2	8819

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EXAMINER	
WONG, ALLEN C	
ART UNIT	PAPER NUMBER
2621	

NOTIFICATION DATE	DELIVERY MODE
06/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/651,626	DAS ET AL.	
	Examiner	Art Unit	
	Allen Wong	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 4/12/07 have been fully read and considered but they are not persuasive.

Since applicant has submitted a terminal disclaimer, the double patenting rejection is withdrawn.

The 35 U.S.C. 101 rejection on claims 10 and 19 is maintained since the "computer readable medium" is not clearly stated. Claims 10 and 19 need to specifically disclose "*a computer readable medium encoded with a computer program comprising computer executable instructions*" to meet with today's 35 U.S.C. 101 statutory requirements.

Regarding lines 10-12 on page 6 of applicant's remarks, applicant states that Wasserman does not disclose base claim 2 requirement of circuitry for aggregation of the motion data and aggregation of texture data of the groups of pixels of the input digital video. The examiner respectfully disagrees. In column 5, lines 62-67 and column 10, lines 16-32, Wasserman discloses the compression of motion and texture data via MPEG-4 compression scheme. It is well known in the art of video compression that the motion data and texture data are extracted, ascertained and processed for efficiently encoding high quality image data.

Regarding lines 16-18 on page 6 of applicant's remarks, applicant contends that Wasserman does not disclose the claim 11 requirement of a decoder operable to interpret separate sequences of symbols as aggregated motion data and aggregated

texture data. The examiner respectfully disagrees. In column 5, lines 62-67 and column 10, lines 16-32, Wasserman discloses the compression of motion and texture data via MPEG-4 compression scheme. It is well known in the art of video compression that the motion data and texture data are extracted, ascertained and processed for accurately, efficiently encoding high quality image data so as to produce high quality image data at the decoding terminal without undue degradation to image quality by robustly implementing cost saving measures and reducing hardware requirements. In figure 1, element 180 is where the data can be decompressed, displayed and viewed after decompression process to decoding the MPEG-4 encoded data compressed by element 112.

Wasserman does not specifically disclose the term "resynchronization word". However, Wasserman discloses in that the video image data is displayed onto a screen that includes motion and texture together (col.16, ln.16-32). It would have been obvious to one of ordinary skill in the art to acknowledge that since the motion and texture information are displayed together in a monitor for viewing, there must be a type of resynchronization word or data being inserted for permitting the encoding of motion and texture data so as to decode image data for viewing high quality full motion and texturized image data on the monitor screen.

Thus, the rejection is maintained.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 10 and 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 10 defines a "said first circuitry is a programmable processor executing a first program; and (b) said second circuitry is said programmable processor executing a second program" embodying functional descriptive material. Claim 19 defines a "said first circuitry is a programmable processor executing a first program" embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology

permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently "said first circuitry is a programmable processor executing a first program; and (b) said second circuitry is said programmable processor executing a second program" and "said first circuitry is a programmable processor executing a first program" can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasserman (5,781,184).

Regarding claim 2, Wasserman discloses an encoder for motion-compensated video, comprising:

(a) first circuitry operable to extract motion data and texture data for a plurality of groups of pixels of input digital video (col.5, ln.62-67 and col.10, ln.16-32; Wasserman discloses the compression of motion and texture data via MPEG-4 compression scheme); and

(b) second circuitry coupled to an output of said first circuitry, said second circuitry operable to aggregate said motion data and to aggregate said texture data (col.5, ln.62-67 and col.10, ln.16-32).

Wasserman does not specifically disclose the resynchronization word between said aggregated motion data and said aggregated texture data. However, Wasserman discloses in that the video image data is displayed onto a screen that includes motion and texture together (col.16, ln.16-32). It would have been obvious to one of ordinary skill in the art to acknowledge that since the motion and texture information are displayed together in a monitor for viewing, there must be a type of resynchronization word or data being inserted for permitting the encoding of motion and texture data so as to decode image data for viewing high quality full motion and texturized image data on the monitor screen.

Note claims 3-6 and 10 have similar corresponding elements.

Regarding claims 7-8, Wasserman discloses the use of variable length coding (col.5, ln.62-67; in MPEG encoding, VLC or variable length coding is used).

Regarding claim 9, Wasserman discloses the use of shape data (col.5, ln.62-67; Wasserman discloses implementing the encoding of video image data in terms of motion, shape and texture coding as it is defined in MPEG-4).

Regarding claim 11, Wasserman discloses a decoder for motion-compensated video, comprising:

(a) first circuitry operable to interpret a first sequence of symbols as aggregated motion data of groups of pixels and interpret a second sequence of symbols as

aggregated texture data of said groups of pixels (col.5, ln.62-67 and col.10, ln.16-32; Wasserman discloses the compression of motion and texture data via MPEG-4 compression scheme; fig.1, element 132 is a decoder for decoding video image data).

Wasserman does not specifically disclose the "resynchronization word". However, Wasserman discloses in that the video image data is displayed onto a screen that includes motion and texture together (col.16, ln.16-32). It would have been obvious to one of ordinary skill in the art to acknowledge that since the motion and texture information are displayed together in a monitor for viewing, there must be a type of resynchronization word or data being inserted for permitting the encoding of motion and texture data so as to decode image data for viewing high quality full motion and texturized image data on the monitor screen.

Note claims 12-15 and 19 have similar corresponding elements.

Regarding claims 16-17, Wasserman discloses variable length decoding (col.5, ln.62-67; in MPEG encoding, VLC or variable length coding is used, so VLD or variable length decoding must be used to perform the converse of the VLC).

Regarding claim 18, Wasserman discloses the use of shape data (col.5, ln.62-67; Wasserman discloses implementing the encoding of video image data in terms of motion, shape and texture coding as it is defined in MPEG-4).

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Allen Wong
Primary Examiner
Art Unit 2621

AW
6/18/07